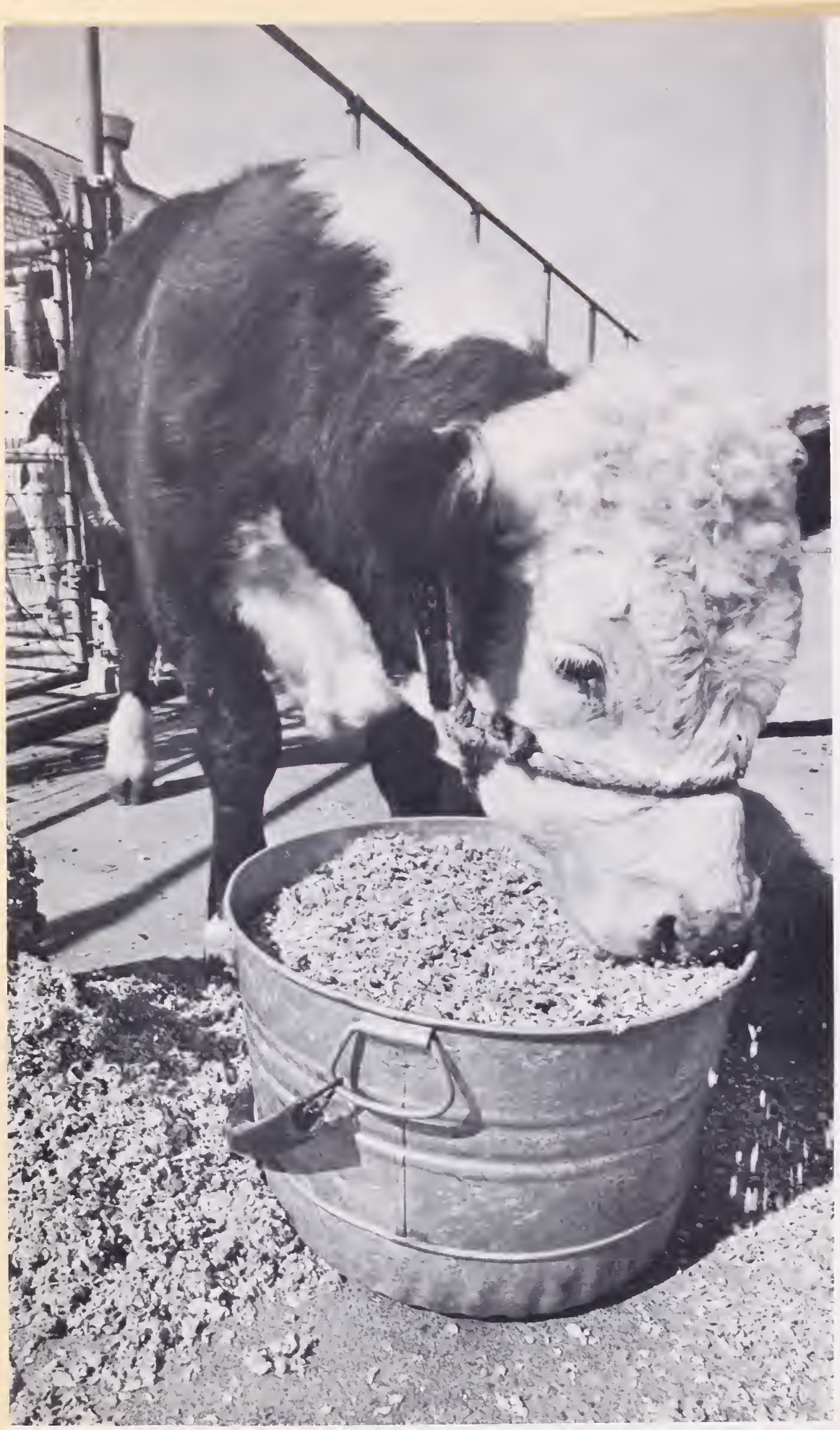
U. S. Department of Agriculture / Agricultural Research Service / Picture Story 247 / January 1972

1971: RESEARCH ROUNDUP

Pictured here are some highlights of work done by researchers in the Agricultural Research Service of the U. S. Department of Agriculture during 1971.

FOAM BLANKET FOR CROPS -- A blanketing foam -- nontoxic to plants and biogradeable in the soil--has been developed by USDA's Agricultural Research Service to protect young truck crops from late spring freezes, thus assuring a longer fresh vegetable season for the consumer. The foam, applied over crops by tractor-mounted generators, lasts from 8 to 16 hours. Plants protected by foam stay about 22 degrees F. warmer than unprotected plants. (1270A1180-18)

Magazines and newspapers may obtain 8x10 prints of these photographs from the Photography Division, Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250. Specify title and number of this publication.



All The News That's Fit To Eat—

Old newspapers are being fed to farm animals as a forage substitute by scientists of USDA's Agricultural Research Service. This is part of a general study on ways to make ruminant animals more efficient users of materials that man cannot eat which may pose potential pollution problems. Used newsprint, a continually available source of wood by-product, was ground up and mixed with molasses, hay, soybean meal, cracked corn, salt and minerals in various concentrations. The scientists feel that newsprint can replace at least 8 percent of the roughage in an animal's diet without any adverse effects. (1070A980-4)

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Research Protects Livestock Against Foreign Threats

Protection of United States livestock from foreign animal diseases depends greatly on research conducted on an island off the coast of Long Island, New York. Here at Plum Island, scientists of USDA's Agricultural Research Service study diseases that could devastate this country's livestock should the disease cross our borders. Foot and mouth, rinderpest, and African swine fever are just a few of the diseases which pose a constant threat to livestock. Through research on diagnosis and treatment of these diseases, the Plum Island scientists have helped protect a valuable livestock industry. The island contains 800 acres and is about 3 miles wide at its widest point (1071X1276-3). In an animal isolation room at the Plum Island facility a scientist is shown collecting blood from an experimentally infected steer. Danger of escape of virus is reduced by negative air pressure in the room and water-tight seals around the doors and sterilization of all water and animal wastes from the room. Every person entering the isolation room must change from normal laboratory clothing to special coveralls, rubber boots, a cap, and surgical gloves. This clothing must be sterilized by autoclaving before it is removed from the room and the person must take a complete shower before exiting. (1071X1187-20).

Food and Health—

A human nutrition scientist at Beltsville, Md., feeds a rat in research aimed at learning how the liver synthesizes fat from carbohydrates—information that may be related to coronary health in man. Ultimately, physicians may be able to identify people afflicted with certain metabolic patterns and prescribe diets that would help postpone or avert atherosclerosis and heart disease. (0671K700-7)

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Seeds For Survival—

Every major U. S. crop origineted elsewhere. Emigrants, of course, brought many seede with them. Since 1898, over 350,000 kinde of plante heve been systematically introduced into this country. Due to the leck of controlled storaga fecilitiea in earlier yeere, much of our valueble germ plesm has been lost. To guard against future loeeee, the USDA's Agricultural Research Service in 1958 established the National Seed Storage Laboratory at Fort Collins, Colorado. Scientiste there preserve germ plasm to aid the world's plant breeders in improving old crops. This fecility aleo triee to eava from extinction aeede of wild and primitiva plants thet are endowed with irreplaceable traits such as dieeaee reaistance or high protein content. Here tachnicians are planting eeeda on speciel paper for germination teets. After planting, the eeeds are pleced in small germination chambers (background) or in large walk-in germination chambere, which ers deeigned to provide optimum germination environment for eech species of seed. The leboratory etores ovar 80,000 different kinds of aeeds--a living reserve of germ plasm for tomorrow. (1270A1167-7)

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